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WAGNER, MURABITO & HAO LLP
Third Floor
Two North Market Street
San Jose, CA 95113

EXAMINER

SHAPIRO, LEONID

ART UNIT	PAPER NUMBER
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2629

MAIL DATE	DELIVERY MODE
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06/08/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/773,136

Applicant(s)

GETTEMY ET AL.

Examiner

Leonid Shapiro

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,6-12,16-21,24 and 25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,6-8,10-12,16-18,20,21,24 and 25 is/are rejected.
- 7) ☒ Claim(s) 9,19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948). | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-2, 8, 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sirola et al. (US Patent No. 6,415,138 B2) in view of Nishikawa et al. (US Patent 5,907,375).

As to claim 1, Sirola et al. teaches a user interface for a portable electronic device (See Fig. 32, items 3a-3d, Col. 4, Lines 38-48), user interface comprising:

a) a display panel, display panel forming a first layer of user interface (See Fig. 1, item 5, in description See Col. 4, Lines 60-63); and

b) a touch sensor (flexible foil-like activation means) coupled with display panel, flexible foil-like activation means forming a second layer of user interface (See Figs. 1-4, items 3,5, Col. 5, Lines 1-5 and Col. 6, Lines 33-43), wherein flexible foil-like activation means is operable to register a position where contact is made with a surface of user interface, wherein a particular position on user interface is translated into a particular command for controlling portable electronic device (See Figs. 1-2, items 3,5,3a-3d, in description See Col. 4, Lines 36-60).

Sirola et al. does not disclose flexible touch sensor disposed immediately under a bottom of flexible display panel and is separable from flexible display panel.

Nishikawa et al. teaches flexible touch sensor disposed immediately under a bottom of flexible display panel and is separable from flexible display panel (See Fig. 1, items 1-2, from Col. 8, Line 64 to Col. 9, Line 17, Col. 9, Lines 57-63 and from Col. 11, Line 57 to Col. 12, Line 3).

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement teaching of Nishikawa et al. into Sirola et al. system in order to improve viewability (See Col. 4, Line 35-42 in the Nishikawa et al. reference).

As to claim 20, Sirola et al. teaches a method for providing a user interface for a portable computer system (See Fig. 32, items 3a-3d, Col. 4, Lines 38-48), method comprising the steps of:

- a) displaying images and characters to user via a display panel (See Figs. 1-2, items 3,5,3a-3d, in description See Col. 4, Lines 36-60),

- b) receiving input via a touch sensor (foil-like activation means) is operable to register a position where contact is made with a surface of display panel (See Figs. 1-2, items 3,5,3a-3d, in description See Col. 4, Lines 36-60);

- c) translating input into a particular command for controlling portable electronic device (See Fig. 2, items 3,5,3a-3d, in description See Col. 4, Lines 48-60)

Sirola et al. does not disclose flexible touch sensor disposed immediately under a bottom of flexible display panel and is separable from flexible display panel.

Nishikawa et al. teaches flexible touch sensor disposed immediately under a bottom of flexible display panel and is separable from flexible display panel (See Fig. 1,

items 1-2, from Col. 8, Line 64 to Col. 9, Line 17, Col. 9, Lines 57-63 and from Col. 11, Line 57 to Col. 12, Line 3).

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement teaching of Nishikawa et al. into Sirola et al. system in order to improve viewability (See Col. 4, Line 35-42 in the Nishikawa et al. reference).

As to claims 2, 21 Sirola et al. teaches touch sensor (See Fig.4, item 5, in description See Col. 6, Lines 34-43) and Nishikawa et al. teaches flexible display panel is (See Fig. 1, item 2, Col. 8, Lines 64-67).

As to claim 8, in modified Sirola et al. and Nishikawa et al. apparatus a support shelf structure is disposed beneath flexible touch sensor structure (Col. 6, Lines 29-43 in Sirola et al. reference) or Nishikawa et al. teaches flexible display panel (See Fig. 1, item 2, Col. 8, Lines 64-67).

2. Claims 10, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikinis et al. (US Patent No.5,634,080) in view of Katsura and Nishikawa et al.

As to claim 10, Kikinis et al. teaches a portable computer system comprising:

a) a bus (See Fig. 3, items 17,40, in description See Col. 8, Lines 26-65);

b) a memory device coupled with the bus (See Fig. 3, items 13,17, in description See Col. 8, Lines 22-30);

c) a processor coupled with bus (See Fig. 3, items 11, 17, in description See Col. 8, Lines 8-20);

d) a display panel coupled with bus, display panel forming a first layer of a user interface (See Fig. 3, item 25, in description See Col. 9, Lines 24-25); and

e) a touch sensor coupled with flexible display panel, touch sensor forming a second layer of a user interface (See Fig. 3, item 27, in description See Col. 9, Lines 24-25).

Kikinis et al. does not disclose flexible touch sensor disposed immediately under a bottom of flexible display panel and is separable from flexible display panel.

Nishikawa et al. teaches flexible touch sensor disposed immediately under a bottom of flexible display panel and is separable from flexible display panel (See Fig. 1, items 1-2, from Col. 8, Line 64 to Col. 9, Line 17, Col. 9, Lines 57-63 and from Col. 11, Line 57 to Col. 12, Line 3).

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement teaching of Nishikawa et al. into Sirola et al. system in order to improve viewability (See Col. 4, Line 35-42 in the Nishikawa et al. reference).

As to claim 18, in modified Kikinis et al. and Nishikawa et al. apparatus a support shelf structure is disposed beneath flexible touch sensor structure (Col. 2, item 36, in description See Col. 7, Lines 43-60 in Kikinis et al. reference).

As to claims 19, Kikinis et al. and Nishikawa et al. do not show an additional instance of flexible touch sensor, additional flexible touch sensor disposed beneath a support shelf, additional instance of flexible touch sensor coupled to user interface; and an additional instance flexible display panel, additional flexible display panel disposed beneath additional flexible touch sensor, additional instance of flexible touch sensor

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coupled to user interface, whereby two sided flexible display functionality is provided to the user interface. Since modified Kikinis et al. and Nishikawa et al. apparatus provided instance of flexible touch sensor, flexible touch sensor disposed beneath a support shelf, instance of flexible touch sensor coupled to user interface; and an instance flexible display panel, flexible display panel disposed beneath flexible touch sensor, I instance of flexible touch sensor coupled to user interface, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement additional flexible touch sensor and flexible display panel in the Kikinis et al. and Lueders apparatus in order to provide two sided functionality to user interface.

3. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over of Nishikawa et al. and the Kikinis et al. as applied to claim 10 above, and further in view of Sirola et al.

As to claim 11, Nishikawa et al., Kikinis et al. do not disclose the touch sensor is operable to register position where contact made with a surface of display panel, wherein a particular position on display panel is translated into a particular command for controlling portable electronic device.

Sirola et al. teaches the touch sensor is operable to register position where contact made with a surface of display panel, wherein a particular position on display panel is translated into a particular command for controlling portable electronic device (See Fig. 2, items 3a-d, in description See Col. 4, Lines 39-48).

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement teaching of Sirola et al. into Nishikawa et al., Kikinis et al. system in order to improve manufacturability (See Col. 3, Line 24-29 in the Sirola et al. reference).

As to claim 12, Nishikawa et al., Kikinis et al. do not disclose display panel is disposed beneath touch sensor, wherein touch sensor is disposed between display panel and a user.

Sirola et al. teaches display panel is disposed beneath touch sensor, wherein touch sensor is disposed between display panel and a user (See Figs. 1-4, items 5,3, in description See Col. 5, Lines 1-5).

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement teaching of Sirola et al. into Nishikawa et al., Kikinis et al. system in order to improve manufacturability (See Col. 3, Line 24-29 in the Sirola et al. reference).

4. Claims 7, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sirola et al., Nishikawa et al. as aforementioned in claims 1, 20 in view of Lui et al. (US Patent No. 6,256,009 B1).

Sirola et al., Nishikawa et al. teaches flexible display panel is (see fig. 1, item 4) but do not show the electronic paper (ink) as the fabrication technology.

Lui et al teaches electronic ink technology employed in entering data written by hand directly on screen to computer (See Fig.2, items 32,62, in description See Col. 4, Lines 10-40).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the electronic paper (ink) as shown by Lui in the Sirola et al., Nishikawa et al. apparatus for providing a user interface in order to receive pen movements as digital ink, and display the ink on the screen as the input (See Col. 1, Lines 29-31 in the Lui et al. reference).

5. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable under 35 U.S.C. 103(a) as being unpatentable over Kikinis et al., Nishikawa et al. as aforementioned in claim 10 in view of Lui et al.

Kikinis et al., Nishikawa et al. do not show the electronic paper (ink) as the fabrication technology.

Lui et al teaches electronic ink technology employed in entering data written by hand directly on screen to computer (See Fig.2, items 32,62, in description See Col. 4, Lines 10-40).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the electronic paper (ink) as shown by Lui in Kikinis et al., Nishikawa et al. apparatus for providing a user interface in order to receive pen movements as digital ink, and display the ink on the screen as the input (See Col. 1, Lines 29-31 in the Lui et al. reference).

6. Claims 6, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sirola et al., Nishikawa et al. as aforementioned in claims 1,20 in view of Post et al. (US Patent No. 6,210,771 B1) and Sandbach (US Patent No. 6,333,736 B1).

Sirola et al., Nishikawa et al. do not show fabric comprises conductive fibers, conductive fibers adapted to conduct electrical impulses responsive to contact with user interface for the touch sensor.

Sandbach teaches fabric comprises conductive fibers, conductive fibers adapted to conduct electrical impulses responsive to contact with user interface for the touch sensor (See Fig.4, items 107-108, 111-112, in description See Col. 7, Lines 4-8).

It would have been obvious to one of ordinary skill in the art at the time of the invention fabric comprises conductive fibers, conductive fibers adapted to conduct electrical impulses responsive to contact with user interface for the touch sensor as shown by Sandbach in Sirola et al., Nishikawa et al. apparatus for providing a user interface in order to detect the position of mechanical interaction in a sensor constructed from fabric, wherein a substantially constant electrical current is established through element (See from Col. 1, Line 66 to Col. 2, Line 2 in the Sandbach reference).

Sirola et al., Nishikawa et al. and Sandbach, do not show flexible touch sensor, wherein flexible touch sensor comprises a fabric.

Post et al. teaches touch panel with flexible spacers, wherein flexible touch sensor comprises a fabric (See Fig. 4, items 400, 405, 410, from Col. 8, Line 62 to Col. 9, Line 9 and Col. 9, Lines 58-65).

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement teaching of Post et al. into Sirola et al., Nishikawa et al. and Sandbach system in order to use fabrics as an integral elements which could be folded, rolled, or wadded up (See from Col. 1, Line 61 to Col. 2, Line 8 in the Post et al. reference).

7. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kikinis et al., Nishikawa et al. as aforementioned in claim 10 in view of Sandbach and Post et al.

Kikinis et al., Nishikawa et al. do not show fabric comprises conductive fibers, conductive fibers adapted to conduct electrical impulses responsive to contact with user interface for the touch sensor.

Sandbach teaches fabric comprises conductive fibers, conductive fibers adapted to conduct electrical impulses responsive to contact with user interface for the touch sensor (See Fig.4, items 107-108, 111-112, in description See Col. 7, Lines 4-8).

It would have been obvious to one of ordinary skill in the art at the time of the invention fabric comprises conductive fibers, conductive fibers adapted to conduct electrical impulses responsive to contact with user interface for the touch sensor as shown by Sandbach in Kikinis et al., Nishikawa et al. apparatus for providing a user interface in order to detect the position of mechanical interaction in a sensor constructed from fabric, wherein a substantially constant electrical current is established through element (See from Col. 1, Line 66 to Col. 2, Line 2 in the Sandbach reference).

Kikins et al., Nishikawa et al. and Sandbach do not show flexible touch sensor, wherein flexible touch sensor comprises a fabric.

Post et al. teaches touch panel with flexible spacers, wherein flexible touch sensor comprises a fabric (See Fig. 4, items 400, 405, 410, from Col. 8, Line 62 to Col. 9, Line 9 and Col. 9, Lines 58-65).

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement teaching of Post et al. into Kikins et al., Nishikawa et al. and Sandbach system in order to use fabrics as an integral elements which could be folded, rolled, or wadded up (See from Col. 1, Line 61 to Col. 2, Line 8 in the Post et al. reference).

Allowable Subject Matter

8. Claims 9,19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Relative to claims 9,19 the major difference between the teaching of the prior art of record (Sirola et al., and Nishikawa et al.) and the instant invention is that an additional instance of said flexible touch sensor, said additional flexible touch sensor disposed beneath said support shelf, said additional flexible touch sensor coupled to said user interface; and an additional instance of said flexible display panel, said additional flexible display coupled to said user interface, said additional flexible display

panel disposed beneath said additional flexible touch sensor, whereby two sided flexible display functionality is provided to said user interface.

Response to Amendments

9. Applicant's arguments filed on 03/29/07 have been fully considered but they are not persuasive:

On page 8, last paragraph of the Remarks, Applicant's stated that the activation means as taught by Sirola is merely a cover that can transmit pressure. Moreover, the activation means as disclosed by Sirola is incapable of displaying information, content and images. As such, Sirola fails to teach or suggest a flexible display panel, as claimed. However, Sirola teaches display panel (fig. 1, item 5, col. 4, lines 60-63) and Nishikawa teaches a flexible display panel (fig. 1, item 1). In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

On page 10, 2nd paragraph of the Remarks, Applicant's stated that Nishikawa teaches away from the claimed embodiment by disclosing that to enhance contrast, the liquid crystal sheet is sandwiched between resin polarizing plates and an aluminum reflection films bonded to the opposed face to the switch matrix board. As such, Nishikawa fails to teach or suggest that the flexible touch sensor is disposed immediately under a bottom of flexible display panel and is separate from flexible

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display panel, as claimed.' However, polarization plates and reflectors are parts of the display. Therefore, Nishikawa teaches the flexible touch sensor is disposed immediately under a bottom of flexible display panel and is separate from flexible display panel.

The same arguments will apply to rejection of independent claims 10,20.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Telephone inquire


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonid Shapiro whose telephone number is 571-272-7683. The examiner can normally be reached on 8 a.m. to 5 p.m..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LS
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RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600